

Unanswered Questions: DTaP/DT and Tdap/Td

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1. Is the CDC considering reinstituting whole cell pertussis?

The CDC does not determine which vaccines are manufactured. This is determined by the vaccine manufacturers.

2. Why are insurance companies saying they will not pay for close contacts of newborns any time period less than 10 years when pregnant females are to receive them with each pregnancy?

While pregnant women are recommended to receive a dose of Tdap with each pregnancy, close contacts of newborns are not recommended to receive a dose of Tdap with each pregnancy. If a close contact has received one dose of Tdap in past, no further doses are recommended.

3. A child that is currently 1 year and 9 months of age inadvertently received a Tdap as the 4th dose in the DTaP series. Should this dose be repeated? What vaccine should be administered for the 5th dose at school entry? When this same child reaches age 11-12 years old will they still need a Tdap for the adolescent booster?

A dose of Tdap administered as the 4th dose of the DTaP does not need to be repeated. The child should receive DTaP at 4-6 years of age for the 5th dose in the series. Once this child reaches age 11-12 years, they would be recommended to receive a Tdap booster.

4. If a patient older than 7 year old has history of receiving 2 doses of DTaP but only the 2nd dose was given at age older than 12 months, do they still need 4 doses to complete the series?

Yes, this patient would require 4 doses to complete the series. Details regarding DTaP/Tdap vaccine catch-up can be found within the Job Aids at the following link:

<http://www.cdc.gov/vaccines/schedules/downloads/child/job-aids/dtap.pdf>

5. Why is Adacel the second option?

This applies only to persons age 65 years and older. When feasible, Boostrix should be used for adults 65 years of age and older because it is approved by the Food and Drug Administration for persons of this age. However, either Tdap vaccine administered to a person 65 years of age or older provides protection. If Boostrix is not available, Adacel may be administered. This is an off-label ACIP recommendation.

6. Are there studies to show how long it takes for protection to be conferred after vaccine is given? Is there a time frame that individuals should wait to be around an infant that is safe to be considered protected? In pregnancy, are there studies to show how long it takes for protection to be conferred to the infant after vaccine is given?

For pertussis, there are no well-accepted definitive serologic or laboratory correlates of protection against pertussis. After receipt of Tdap, immunogenicity studies have shown it takes a minimum of 2 months to mount an immune response to the vaccine antigens.

For pregnancy, there are various studies looking at timing of vaccination and concentration of maternal antibodies in infants (cord blood). An observational study from the United Kingdom measured the

effectiveness in infants less than 3 months of age at onset of pertussis, vaccine effectiveness was 91% for infants whose mothers were vaccinated at least 28 days before birth. In contrast, effectiveness was 38% for infants whose mothers were vaccinated 0 to 6 days before OR 1 to 13 days after birth.

7. Among the pertussis cases which were reported in 2014, what percentage of those 11 years and older were vaccinated?

According to the CDC's Enhanced Pertussis Surveillance sites, approximately 70% of case-patients 11 years and older were up-to-date on their pertussis vaccines

8. A new father had Tdap 10 years ago, would you give Td or Tdap with newborn in the household?

Currently, only one lifetime dose of Tdap is recommended (except for pregnant women). The father would be recommended to receive Td.

9. Is it recommended to give a Tdap or Td vaccine to an adult who has had a Tetanus containing vaccine 5 years ago but got injured by a rusty nail?

If the last dose of tetanus-containing vaccine was five or more years ago, a person having a tetanus-prone wound (such as but not limited to, wounds contaminated with dirt, feces, soil, and saliva; puncture wounds; avulsions; and wounds resulting from missiles, crushing, burns, and frostbite) should receive another dose of tetanus-containing vaccine. Both Tdap and Td vaccine contain the same amount of tetanus toxoid. If the adult patient has not previously received a Tdap vaccination, Tdap maybe be administered as part of wound management. If the adult patient has received Tdap, they would be recommended to receive Td. However, if your clinic only has one of the vaccines in stock (Td or Tdap), it may be use for wound management in that case regardless of the patient's previous vaccination history.

10. Is there a carrier state for pertussis bacteria in some adults (as in strep carriers)?

There is not a "carrier state" for pertussis, although some adolescents and adults may have asymptomatic infection.

11. Do you administer a Tdap to an adult who received the vaccine between the ages of 11 to 18 years old?

An adult who received a dose of Tdap as an adolescent would be recommended to receive Td every 10 years. Another dose of Tdap would not be recommended (except in pregnant women).

12. At what point in pregnancy should a family member receive this vaccination?

Family members who have not been previously vaccinated with Tdap can received the vaccine at any point during the mother's pregnancy.

13. If a child is taking antibiotics is it recommended to vaccinate at the same time?

Antibiotic use is neither a contraindication, nor precaution to vaccination. However, if the patient has a moderate or severe acute ill, the illness would be a precaution to vaccination.

14. If a 10 year old child was given a DTaP should they still receive a Tdap for their adolescent immunizations at age 11?

DTaP given to patients age 7 or older can be counted as valid for the one-time Tdap dose.

15. If a person received a Tdap vaccine at the age of 18, does this count as the adult dose?

If a patient received a dose of Tdap at the age of 18, they would not be recommended to receive another dose later in adulthood (except women who become pregnant).

16. If a 7 y/o received a dose of DTaP, can that dose be counted?

Yes, this dose can be counted and does not need to be repeated. However, this would be considered a vaccine error and steps should be taken to ensure this does not occur in the future.

17. If an employee (healthcare personnel) states that they think that they've had the Tdap vaccine, but don't have documentation and it's been years since they've received it, should they receive the Tdap vaccine?

Healthcare personnel without documentation of Tdap, would be recommended to receive the Tdap vaccine.

18. What is the rationale for receiving a back to back Tdap with pregnancy one year apart?

Antibody levels wane substantially during the first year after vaccination, because antibody levels wane, the ACIP concluded a single dose of Tdap at one pregnancy would be insufficient to provide protection for subsequent pregnancies. Therefore, Tdap should be administered during each pregnancy, regardless of the interval since the last pregnancy.

19. For a 10 year old that is fully vaccinated yet has a wound that requires a tetanus containing vaccine; what should they receive and then what should they receive for subsequent doses after the 11th year?

Both Tdap products are approved for use in adolescents as young as 10 years of age. It would seem reasonable to vaccinate this adolescent with Tdap for wound management. Subsequent recommended doses would be a booster of Td every 10 yrs, unless this adolescent is female. If this is a female then she would be recommended a dose of Tdap during pregnancy.

20. If we know that pertussis immunity wanes quickly after a dose of Tdap, why do we not recommend more frequent booster vaccinations?

Currently Tdap is only approved by the Food and Drug Administration for a single dose. Therefore any such recommendation at this time would be considered "off-label" use. The ACIP has reviewed this issue in June 2013, and October, 2014. Currently, the data suggest revaccination would have a limited effect on the burden of pertussis disease in the U.S., as many adults have not received their first dose of Tdap.

The highest morbidity and mortality of pertussis is in infants. There is a strategy in place for this age group. The ACIP strongly supports focusing efforts on preventing pertussis in infants through the existing ACIP recommendation to vaccinate pregnant women during each pregnancy. CDC and ACIP concluded that data do not favor a general recommendation for a second Tdap and therefore does not favor a universal recommendation. We are aware the manufacturers of Tdap vaccine, are collecting data on revaccination. The ACIP will consider revisiting this topic should additional data or FDA approval become available in the future.

21. An administration question: If a Pediarix dose is given subcutaneous by mistake and not IM does the dose need to be repeated or does only the Hep B portion of the vaccine need to be repeated?

The package insert for Pediarix states “Do not administer this product intravenously, intradermally, or subcutaneously”. A dose of Pediarix administered subcutaneously should be repeated.

22. What is minimum interval between Td and Tdap or vice versa?

The interval between Td and Tdap depends on the indication for vaccination.

Routine use: Adults aged ≥ 19 years should receive a single dose of Tdap to replace a single dose of Td for active booster vaccination against tetanus, diphtheria, and pertussis if they received their last dose of Td >10 years earlier. The next dose of Td should be administered 10 years following the Tdap dose.

Adolescents aged 11–18 years should receive a single dose of Tdap instead of Td for booster immunization against tetanus, diphtheria, and pertussis if they have completed the recommended childhood DTP/DTaP vaccination series and have not received Td or Tdap.

Adolescents aged 11–18 years who received Td, but not Tdap, are encouraged to receive a single dose of Tdap to provide protection against pertussis if they have completed the recommended childhood DTP/DTaP vaccination series. An interval of at least 5 years between Td and Tdap is encouraged to reduce the risk for local and systemic reactions after Tdap vaccination. However, an interval less than 5 years between Td and Tdap can be used.

Short interval between Td and Tdap: Intervals <10 years since the last Td may be used to protect against pertussis. Particularly in settings with increased risk for pertussis or its complications, the benefit of using a single dose of Tdap at an interval <10 years to protect against pertussis generally outweighs the risk for local and systemic reactions after vaccination (i.e. Healthcare personnel, adults who have not previously received a Tdap and anticipate contact with infant <12 months of age).

Persons ≥ 7 years of age without evidence of vaccination should follow the recommended primary series schedule. After the first Tdap dose, the second dose of Td should be administered at least 4 weeks after dose 1. The third dose Td should be administered at least 6 months after dose 2. Booster Td doses should be administered every 10 years.

23. A patient listed a history of Guillain-Barre Syndrome within 6 weeks after a prior dose of tetanus toxoid containing vaccine is a precaution. Is the concern that these vaccines can exacerbate these disease?

ACIP has recommended Guillain-Barré syndrome occurring <6 weeks after receipt of a tetanus toxoid-containing vaccine is a precaution for subsequent tetanus toxoid-containing vaccines. The Institute of Medicine (IOM) concluded that evidence favored acceptance of a causal relation between tetanus toxoid-containing vaccines and Guillain-Barré syndrome. Evidence is based primarily on a well-documented case report. However, a subsequent analysis of active surveillance data in both adult and pediatric populations failed to demonstrate an association between receipt of a tetanus toxoid-containing vaccine and onset of Guillain-Barré syndrome within 6 weeks following vaccination.

(<http://www.cdc.gov/mmwr/PDF/rr/rr5503.pdf>)